

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 11-15 without prejudice.

1. (ORIGINAL) An optical cap structure for semiconductor device, said structure comprising:

a cap body having an opening;

an optical window made of glass plate sealed with said cap body to cover said opening so that an optical beam transmits through said optical window; and

a sealing member for sealing said optical window with said metal cap, said sealing member including a bismuth low-melting point glass containing no lead, an intermediate metal layer attached to said metal cap body, said intermediate metal layer being a metal capable of causing an eutectic reaction with respect to Bi contained in said low-melting point glass, and an eutectic alloy layer thus formed between said low-melting point glass and said intermediate metal layer.

2. (ORIGINAL) An optical cap structure as set forth in claim 1, wherein said intermediate metal is a plated gold, so that said optical window is sealed with the cap body by means of the eutectic alloy of Bi contained in said low-melting point glass and Au of the intermediate metal.

3. (ORIGINAL) An optical cap structure as set forth in claim 1, wherein said intermediate metal is a plated palladium, so that said optical window is sealed with the cap body by means of the eutectic alloy of Bi contained in said low-melting point glass and Pd of the intermediate metal.

4. (ORIGINAL) An optical cap structure as set forth in claim 1, wherein said intermediate metal is a Sn-Ni alloy plated layer, so that said optical window is sealed with the cap body by means of the eutectic alloy of Bi contained in said low-melting point glass and Sn-Ni

alloy of the intermediate metal.

5. (ORIGINAL) An optical cap structure as set forth in claim 1, wherein said intermediate metal is a Zn-Ni alloy plated layer, so that said optical window is sealed with the cap body by means of the eutectic alloy of Bi contained in said low-melting point glass and Zn-Ni alloy of the intermediate metal.

6. (ORIGINAL) An optical cap structure as set forth in claim 1, wherein said intermediate metal is a Sn-Zn alloy plated layer, so that said optical window is sealed with the cap body by means of the eutectic alloy of Bi contained in said low-melting point glass and Sn-Zn alloy of the intermediate metal.

7. (ORIGINAL) An optical cap structure as set forth in claim 1, wherein said low-melting point glass contains not less than 30 weight % of Bi.

8. (ORIGINAL) An optical cap structure as set forth in claim 1, wherein a first surface of the intermediate metal opposite to a second surface attached to the metal cap body is a rough surface, a crystal particle size of said first surface being 0.5 μm to 1.0 μm .

9. (ORIGINAL) An optical cap structure as set forth in claim 8, wherein the intermediate metal attached to the metal cap body comprises multiple plated metal layers, at least one of the metal layers having a rough surface, a crystal particle size of which being 0.5 μm to 1.0 μm .

10. (ORIGINAL) An optical device comprising:
a stem;
an optical element mounted on said stem;
a cap body secured on said stem to accommodate therein said optical element, said cap body having an opening;
an optical window made of glass plate sealed with said cap body to cover said opening so that an optical beam transmits through said optical window; and
a sealing member for sealing said optical window with said metal cap, said sealing member including a bismuth low-melting point glass containing no lead, an intermediate metal layer attached to said metal cap body, said intermediate metal layer being a

metal capable of eutectic reaction with respect to Bi contained in said low-melting point glass, and a eutectic alloy layer thus formed of said low-melting point glass and said intermediate metal layer.

11. (CANCELLED)

12. (CANCELLED)

13. (CANCELLED)

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15. (CANCELLED)